Irwell Catchment Management First Annual Review

ENVIRONMENT AGENCY

February 1997

If you wish to discuss any matter arising from this First Annual Review please contact:-

Vicky Hames
Environment Planner
Environment Agency
North West Region
'Mirwell'
Carrington Lane
Sale
Cheshire
M33 5NL

Tel: (0161) 973 2237, extension 3064
Fax: (0161) 973 4601

Front cover photograph: River Irwell, Manchester City Centre

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1. Vision for the Irwell Catchment

The vision for the Irwell Catchment is to create a cleaner, safer water environment. We will retain or recreate attractive rivers within continuous, open river corridors with a diverse range of habitats and physical features.

The river will be an attractive feature within the urban environment which people will value. It will enhance the quality of life for the area and encourage inward investment.

The Environment Agency will work with other organisations and individuals to achieve sustainable development within the Catchment. We will meet the needs of today while protecting the water environment for future generations and their needs.

The vision expresses the long term ambitions for the Irwell Catchment.

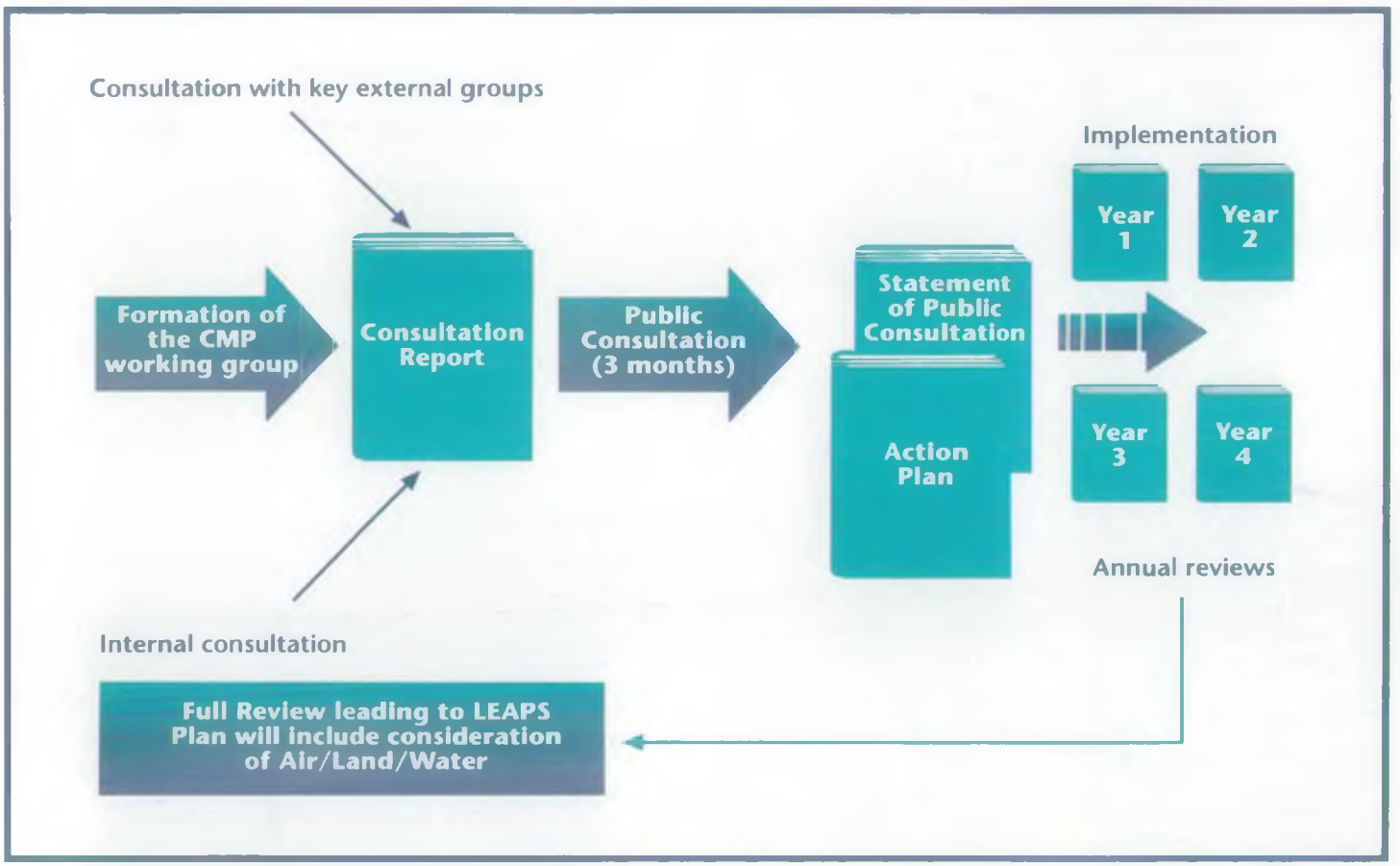
R. Irwell, Ramsbottom

vision

2. Introduction

This is the First Annual Review for the River Irwell catchment and this is the third stage in the Catchment Management process as shown in Figure 1.

Figure 1 The CMP Process



This Annual Review provides a progress update of all the actions stated in the River Irwell Catchment Management Plan Action Report (September 1995) produced under the auspices of the former National Rivers Authority.

2.1 The Environment Agency and Local Environment Agency Plans

On 1 April 1996, the National Rivers Authority (NRA) merged with Her Majesty's Inspectorate of Pollution (HMIP), Waste Regulation Authorities and smaller units from the Department of the Environment, to form the Environment Agency. This merger provides a more comprehensive approach to the protection and management of the environment by combining the regulation of land, air and water.

As guardians of the environment the Agency's vision is:

"A better environment in England and Wales for present and future generations"

The River Irwell Catchment Management Plan (CMP) was produced by the National Rivers Authority and this First Annual Review is the first to be published by the South Area of the North West Region of the Environment Agency. The Agency is committed to the development of an integrated management plan for the water environment in the River Irwell catchment.

The Environment Agency has wider responsibilities than the NRA. The River Irwell Action Plan, as a CMP, addressed the water environment. This Review has taken the opportunity to address wider environmental concerns relating to air, land and water.

The River Irwell CMP will be rewritten as a Local Environment Agency Plan (LEAP) which will reflect the aims, objectives and responsibilities of the Agency (see Section 3, Future Review and Monitoring). These LEAPs, like CMPs, will be local area based plans that address issues and problems through the actions of the Agency in partnership with others or by the agreed action of others. LEAPs will play a key role in the delivery of our services through integrated activity and priority business planning and will promote openness and accountability.

In its statutory guidance to the Agency, on sustainable development, the Department of the Environment promotes integrated environmental management in partnership with other organisations, working to shared objectives. LEAPs are not statutory documents.

2.2 Environment Agency Responsibilities

The Agency has head offices in Bristol and London and is divided into eight regions and 26 areas. The River Irwell catchment is in the South Area of the North West Region.

The Agency has responsibility for:

- The improvement and regulation of water quality
- Pollution prevention and control
- The management of water resources
- Flood defence
- Fisheries
- The regulation of the most potentially polluting industrial processes (Part A processes)
- The regulation of premises that use, store or dispose of radioactive materials
- Licensing and regulation of waste management sites
- Waste minimisation
- Licensing and regulation of waste carriers and brokers

It has general duties with regard to conservation (which includes wildlife, landscape and heritage) and recreation and shares many of its responsibilities with local authorities, in particular waste management and the regulation of emissions to air.

3. Future Review and Monitoring

The River Irwell Catchment Management Plan will be rewritten as two separate LEAPs. The Roch, Irk and Medlock LEAP is due to be published in March/April 1998 and the Irwell and Croal LEAP is due to be published in October 1998. The River Irwell Catchment Management Action Plan Second Annual Review will be published before the conversion to LEAPs if timescales allow.

R. Irwell, Salford

future & review monitoring

4. Action Plans

Fish Pass and Canoe Pass, R. Irwell, Ramsbottom

action plans

4.1 Catchment Wide Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	RESPONSIBILITY OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
CW1	Development Control - The impact that development and development pressures have on the water environment for all Environment Agency functions.	1. Strengthen input to Planning and Development Control process to highlight flood risks, control unsympathetic environmental development, promote green corridors and enhance river features.	Environment Agency	Planning Authorities Developers Riparian Owners	300	-	**ECOLOGY:** On going **FLOOD DEFENCE:** £400K total cost. Completion of flood risk assessments by end of March 1998.
CW2	Lack of survey information on some watercourses	1. Collection and maintenance of information to satisfy Water Quality, Flood Defence, Ecology, Heritage and Recreation requirements.	Environment Agency		90	-	**ECOLOGY:** On going **FLOOD DEFENCE:** £105K total cost. Survey collection almost complete. **WATER QUALITY:** Zinc and copper analysis at RQO sites now complete.
		2. Organise and promote surveys of threatened species and their habitats such as Otters, Water Voles and Bats.	Environment Agency	Wildlife Groups	40		
		3. Create a database of sites suitable for future river rehabilitation schemes.			7.5	-	On going.
CW6	Culverted Sections and Bridges - Risk of culverts and bridges blocking. Clearance and maintenance of debris screens. The number and extent of culverted sections and resulting fragmentation of river habitat.	1. Promote policies that reduce the amount of culverted watercourse through planning liaison and Flood Defence byelaw control. Promote the opening up of river corridors where opportunities arise.	Environment Agency		240	-	On going.
CW7	Instream structures such as culverts and weirs.	1. Where possible provision for the passage of fish over weirs and through culverts.	Environment Agency	Riparian Owners Local Authority		-	On going
CW8	Urban decay and riverside dereliction.	1. Support riverside regeneration initiatives and promote sympathetic enhancement works such as riverside footpaths.	Environment Agency	Local Authorities Voluntary Sectors Mersey Basin Campaign	20	-	On going
CW9	Litter and rubbish problems in and near rivers.	1. Use enforcement powers and continue input to "Waterwatch" and "Streamcare" and encourage public awareness and responsibility for litter and debris in watercourses.	Environment Agency	Local Authorities	200	-	A temporary enforcement officer was appointed in March 1993, and following the success of this role, has now become a permanent position. Enforcement powers are used where necessary, but an educational approach offers the most benefits. The agency will continue to fund waterwatch and streamcare.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
CW10	Review of "main river" lengths to reflect the land use of protected areas.	1. The Environment Agency has agreed guidelines against which application to "main river" shall be judged. A programme of catchment reviews will consider the implications for Environment Agency resources.	Environment Agency	15		Programme of reviews as original action plan, i.e. 97/98, 98/99 & 99/2000.
CW12	Sewer overflows: Widespread impact in the catchment of sewage litter and organic load.	1. Reduction in organic and debris load released from unsatisfactory sewer overflows.	NWW Ltd			A few improvement schemes have been completed. A number of others are under construction. Discussions on most of the remaining unsatisfactory overflows within the current capital programme have started.
CW13	Widespread aesthetic deterioration in the catchment due to domestic foul wastes wrongly connected to surface water drains.	1. Investigation and remedial measures to redirect wrong connections to foul sewer.	Environment Agency NWW Ltd District Councils Private Drainage Owners Plumbers Builders	5	-	Funding for investigations and remedial measures has been and continues to be pursued with NWW Ltd and District Councils.
CW16	Alien Pest Species.	1. Establish a systematic treatment programme for control and eradication of Giant Hogweed, Himalayan Balsam and Japanese Knotweed. 2. Ensure Environment Agency activities do not encourage the spread of the invasive pest species. 3. Liaison with agencies, local authorities and other owners or tenants for the control and eradication of Giant Hogweed in non-waterside locations. 4. Promote public awareness concerning safety implications.	Environment Agency Riparian owner	90	-	1. Planned spraying programme to control Giant Hogweed. £30K per year 97/98 to 99/2000. An application for 10K out of the multifunctional pot is being sought for each of the 3 years from 97/98. This sum is divided between north Mersey catchment and south Mersey catchment Bollin and Weaver. A programme has not been established for the other species yet. 2. A series of presentations to internal functions to increase awareness of risk of spread is ongoing. 3. On going 4. On going

4.2 Sub-Catchment Wide Issues

Upper Irwell Sub-Catchment Wide Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
SCW1 (CW18)	Compensation water requirements and in-river structures require review.	1. Review compensation discharges and replace measuring structures as necessary.	Environment Agency	NWW Ltd		-	A site audit of new sites is currently being undertaken. Some structures have been replaced. The review is likely to be more widespread in view of 1995/96 drought.
SCW2 (CW19)	Widespread aesthetic deterioration in the Catchment due to ochre.	1. Investigate the reduction of the impact of ochreous runoff from spoil tips, waste tips and apparently natural sources.	Environment Agency	Coal Authority	5	-	The Coal Authority commenced investigations in September 1996 into the feasibility and costs of treatment of the Old Meadows minewater discharge - the most significant within the sub-catchment.

River Roch Sub-Catchment Wide Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
SCW1 (CW18)	Compensation water requirements and in-river structures require review.	1. Review compensation discharges and replace measuring structures as necessary.	Environment Agency	NWW Ltd	2	-	A site audit of new sites is currently being undertaken. Some structures have been replaced. The review is likely to be more widespread in view of 1995/96 drought.
SCW2 (CW19)	Widespread aesthetic deterioration in the Catchment due to ochre.	1. Investigate the reduction of the impact of ochreous runoff from spoil tips, waste tips and apparently natural sources.	Environment Agency			-	No progress. Resolution may now be a long term issue.

River Croal Sub-Catchment Wide Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
SCW1 (CW18)	Requirement for more rainfall information.	1. Review raingauge network and identify improvements.	Environment Agency		1	-	Review complete. New raingauge to be constructed at Sweetloves WwTW in 96/97.

River Irk Sub-Catchment Wide Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
SCW1 (CW18)	Periodic aesthetic deterioration of considerable lengths of watercourse in the catchment due to foam.	1. Investigate and action the reduction of the impact of foam causing or promoting agents in the effluents from Oldham, Royton and Castleton STW.	Environment Agency	NWW Ltd	5	-	Improved trade effluent control has been pursued with NWW Ltd. A reduction in the incidence of foam has resulted.
SCW2 (CW19)	Poor fishery due primarily to poor water quality.	1. Stocking of appropriate fish species as and when prevailing water quality allows, and monitoring of fish populations.	Environment Agency		8	-	The situation is monitored as part of a 3 year rolling programme. Next survey due 1998.

River Medlock Sub-Catchment Wide Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
SCW1 (CW18)	Widespread aesthetic deterioration in the Catchment due to ochre.	1. Investigate the ochreous runoff from spoil tips, waste tips and apparently natural sources.	Environment Agency			-	No progress. Resolution may now be a long term issue.
SCW2 (CW19)	Lack of fishery due primarily to poor water quality.	1. Stocking of appropriate fish species as and when prevailing water quality allows, and monitoring of fish populations.	Environment Agency		5	-	Stocking has taken place in 1995 and 1996, and will again in 1997 if fish are available. Success of this stocking will be monitored in 1997 if manpower exists.

Lower Irwell Sub-Catchment Wide Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
SCW1 (CW18)	Poor fishery due primarily to poor water quality.	1. If necessary, stocking of appropriate fish species as and when prevailing water quality allows, and monitoring of fish populations.	Environment Agency		14	-	A survey is currently being undertaken. Full results will be available in early 1997.

4.3 Upper Irwell - Site Specific Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
U. Irwell SS1	R. Irwell - Source to Cowpe Brook. Lack of fishery.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2		A survey is currently being undertaken. Full results will be available in early 1997.
U. Irwell SS2	Greave Clough Brook, Greave. Risk of flooding to industrial units and approx. 27 houses.	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency	Riparian owner	70		Initial assessment complete. No further work proposed.
U. Irwell SS4	R. Irwell - Cowpe Brook to Kirklees Brook. Cowpe Brook - Boarsgreave to R.Irwell. Aquatic invertebrate community severely impaired.	1. Monitor the impact of invertebrate community impairment.	Environment Agency		1.2	-	A student project identified tip leachates and pesticide input from Rossendale STW as possible sources of the problem. Studies concerning the impact of pesticides on the aquatic invertebrate community are continuing.
		2. Investigate the elimination of the loss of permethrin from the Kearns of Waterfoot Ltd. Site.	Environment Agency	Kearns of Waterfoot Ltd	4	-	Some remedial measures have been undertaken by Kearns. Enforcement action has been taken against them. The issue is now unlikely to be resolved before 1998 as previously envisaged.
U. Irwell SS8	Whitewell Brook Newchurch. Flooding to 13 houses, 10 retail and industrial units.	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency		310		Feasibility study complete. Recommendation: no viable scheme.
U. Irwell SS12	R. Irwell - down-stream of Rossendale STW Indications of exceedences of the Environmental Quality Standard for an EC List II Dangerous Substance (Permethrin).	1. Review discharge consent and monitor to check/ensure compliance.	Environment Agency	NWW Ltd Kearns of Waterfoot Ltd	3	-	NWW Ltd have been notified of the required discharge standard and they are pursuing appro-priate trade effluent control. Exceedences of the EQS for copper have now also been recorded. The requirement for control measures is to be evaluated.
U. Irwell SS16	R. Ogden - Holden Wood Reservoir. No obligation to discharge compensation water from Holden Wood Reservoir.	1. Negotiate compensation flows.	Environment Agency	NWW Ltd		-	Issue has been raised with NWW as part of post drought review.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
U. Irwell SS18	R. Irwell - Stubbins (Strongstry).	1. Initial assessment of flooding problem.	Environment Agency		10	-	Initial assessment complete. Feasibility study planned for 97/98.
	Risk of flooding to houses/road due to river siltation.	2. Remove debris from culverts and river channel as necessary, to maintain flood carrying capacity. Control development to avoid reduction in flood protection.	Environment Agency		5		On going.
U. Irwell SS19	R. Irwell - Stubbins (Strongstry). Existing gauging station provides poor hydrometric data.	1. Construct engineering works.	Environment Agency		73	-	Replacement station now operational and running concurrently with Stubbins to provide site to site correlation.
U. Irwell SS21	R. Irwell - Dearden Brook to Holcombe Brook. Vulnerable fishery.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		1		Stocked with Brown Trout 95/96. A survey is currently being undertaken. Full results will be available in early 1997.
U. Irwell SS22	R. Irwell - Ramsbottom Flooding to 10 houses and industrial units (5000m²).	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency		80	-	Feasibility study complete. Detailed design in 97/98.
U. Irwell SS23	R. Irwell - Holcombe Brook to Kirklees Brook. Poor fishery.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2		A survey is currently being undertaken. Full results will be available in early 1997.
U. Irwell SS25	Gin Hall Landfill Site (Closed). Alleged Leachate discharge to Walmersley Brook.	1. Monitor and assess impact.	Environment Agency	Site Owner	1	-	Issue resolved. Environment Agency have monitored and found no problem.
U. Irwell SS27	Pigs Lee Brook, Bury. Risk of flooding to A56 if culvert blocks.	1. Initial assessment of flooding problem.	Environment Agency	Highways Authority	5		Initial assessment complete. No works proposed.
U. Irwell SS30	R. Irwell - Bury Bridge. Existing gauging station provides poor hydrometric data.	1. Construct engineering works.	Environment Agency		61	-	Replacement station now operational and running concurrently to provide site to site correlation.
U. Irwell SS33	R. Irwell - Kirklees Brook to confluence R. Croal. Poor fishery.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		1		A survey is currently being undertaken. Full results will be available in early 1997.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
U. Irwell SS35	Helmshore and Rawtenstall. Scheme for the provision of "Urban Channel Access Ramps".	1. Construct engineering works.	Environment Agency		68		Musbury Brook, Helmshore - Design work in 97/98. Construction planned for 98/99. Estimated cost £25K. Ramps at Rawtenstall removed from programme.
U. Irwell SS37	R Irwell at Radcliffe. Flooding to Industrial Properties.	1. Initial assessment of flooding problem.	Environment Agency		10	-	Initial assessment complete. Feasibility study commenced.

Upper Irwell - New Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
U. Irwell New Issue 1	Kirklees Brook. Newly identified watercourse population of Giant Hogweed.	1. Control and eradicate.	Environment Agency		(see CW16)	-	(see CW16)
U. Irwell New Issue 2	R. Irwell at Summerseat. Newly identified watercourse population of Giant Hogweed.	1. Control and eradicate.	Environment Agency		(see CW16)	-	(see CW16)
U. Irwell New Issue 3	Coney Green High School, Radcliffe. Newly identified watercourse population of Giant Hogweed.	1. Control and eradicate.	Bury MBC				
U. Irwell New Issue 4	Strong & Fisher (Ex Licensed Landfill).	1. Monitor tipping of inert wastes and engineering works to prevent leachate discharge to Irwell.	Environment Agency				
U. Irwell New Issue 5	R Irwell at Radcliffe East Lancashire Paper Mills Landfill Site.	1. Applied Reg 15 condition assess loading impact of leachate and further action as necessary.	Environment Agency				

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
U. Irwell New Issue 6	Tower Farm, Radcliffe. Landfill site.	1. Application for new waste management licence in question. Assess situation and capture via contaminated land regulation if necessary.	Environment Agency				
U. Irwell New Issue 7	Wilcox Drums.	1. Control potential pollution to river in WML conditions.	Environment Agency				

4.4 River Roch - Site Specific Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Roch SS5	R.Roch, Littleborough. Flooding to industrial units of Todmorden Road due to insufficient channel capacity and restricted flow through bridge.	1. Carry out feasibility study, select and design most favourable solution. NB Part of River Roch comprehensive flood alleviation scheme.	Environment Agency	Riparian owner	1500		Feasibility study complete. Design Stage 1 complete.
R. Roch SS8	Longden End Brook, Rakewood. Flooding to properties due to insufficient channel and culvert capacity.	1. Carry out feasibility study, select and design most favourable solution. 2. Construct bypass channels.	Environment Agency		34		Feasibility study complete. Some minor works completed by Rochdale MBC. No further works programmed.
R. Roch SS9	Featherstall Brook, Littleborough. Flooding to industrial units at Foxcroft Street due to insufficient culvert capacity.	1. Carry out feasibility study, select and design most favourable solution. NB Part of River Roch comprehensive flood alleviation scheme.	Environment Agency	Riparian owner	(see SS5)		Feasibility study complete. Design Stage 1 complete.
R. Roch SS10	R. Roch, Dearnley. Risk of flooding to residential and industrial properties in Stubley Mill Road and Peel Street due to insufficient culvert capacity.	1. Carry out feasibility study, select and design most favourable solution. NB Part of River Roch comprehensive flood alleviation scheme.	Environment Agency	Riparian owner	(see SS5)		Feasibility study complete. Design Stage 1 complete.
R. Roch SS11	R. Roch, Smallbridge. Risk of flooding to industrial units due to insufficient capacity of bridge at Dye House Lane.	1. Carry out feasibility study, select and design most favourable solution. NB Part of River Roch comprehensive flood alleviation scheme.	Environment Agency	Riparian owner	(see SS5)		Feasibility study complete. Design Stage 1 complete.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Roch SS13	R. Beal, Newhey. Risk of flooding to residential and industrial property due to insufficient flow capacity of factory access bridge.	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency	Riparian owner	34		Feasibility study currently underway.
R. Roch SS14	R.Beal. Lack of Fishery.	1. Monitoring natural colonisation and review stocking requirements.	Environment Agency		1	-	The situation is monitored as part of 3 year rolling programme. Next survey due 1998.
R. Roch SS16	R. Beal, Milnrow. Risk of flooding to residential and industrial property due to insufficient culvert capacity.	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency	Riparian owner	120		Feasibility study currently underway.
R. Roch SS18	R. Roch, Howarth Cross Flooding to abattoir due to insufficient channel capacity.	1. Carry out feasibility study, select and design most favourable solution. **NB** Part of River Roch comprehensive flood alleviation scheme.	Environment Agency	Riparian owner	(see SS5)		Feasibility study complete. Design Stage 1 complete.
R. Roch SS19	R. Roch, Rochdale. Flooding to industrial units on Belfield Road due to insufficient channel capacity.	1. Carry out feasibility study, select and design most favourable solution. **NB** Part of River Roch comprehensive flood alleviation scheme	Environment Agency	Riparian owner	(see SS5)		Feasibility study complete. Design Stage 1 complete.
R. Roch SS21	R. Roch, Rochdale. Major flooding to industrial and residential properties in Gower Street, Kellet Street and Entwistle Street due to insufficient capacity of structures and channel	1. Carry out feasibility study, select and design most favourable solution. **NB** Part of River Roch comprehensive flood alleviation scheme	Environment Agency	Riparian owner	(see SS5)		Feasibility study complete. Design Stage 1 complete.
R. Roch SS23	R. Roch downstream of Stanney Brook. Exceedence of EC List II Dangerous Substances Environmental Quality Standard of copper.	1. Enforce reduction in release of copper from Makin Metal Powders Ltd. contaminated land area.	Environment Agency	Makin Metal Powders Ltd	4	-	A feasibility study by consultants to Makin Metal Powders Ltd. Into remedial measures has been started. The issue may not now be resolved before 1998 as previously envisaged.
R. Roch SS25	Stanney Brook, Newbold. Risk of flooding to industrial units due to insufficient channel capacity.	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency	Riparian owner	20		Initial assessment complete. No further work proposed.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Roch SS26 & SS27	Stanney Brook. Lack of fishery and aquatic invertebrate community severely impaired due primarily to poor water quality.	1. Enforce reduction in release of copper from Makin Metal Powders Ltd. contaminated land area. 2. Monitor natural colonisation and review stocking requirements once water quality issues have been resolved.	Environment Agency	Makin Metal Powders Ltd	4 1	-	1. A feasibility study by consultants to Makin Metal Powders Ltd. into remedial measures has been started. The issue may not now be resolved before 1998 as previously envisaged. 2. The situation is monitored as part of 3 year rolling programme. Next survey due 1998.
R. Roch SS30	Buckley Brook, Buckley. Flooding to industrial and residential properties due to insufficient capacity of channel and culvert.	1. Carry out feasibility study, select and design most favourable solution. NB Part of River Roch comprehensive flood alleviation scheme.	Environment Agency	Riparian owner	(see SS5)		Feasibility study complete. Design Stage 1 complete.
R. Roch SS32	R. Spodden. Lack of fishery due primarily to poor water quality.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2	-	The situation is monitored as part of 3 year rolling programme. Next survey due 1998. Stocked with Brown Trout 95/96.
R. Roch SS34	Cowm Reservoir and Cowm Brook. Periodic aesthetic deterioration due to discoloration arising from fine solids.	1. Issue and enforce consent at Bardon Roadstone Quarry.	Environment Agency	Bardon Roadstone	4	-	Site drainage improvements have been made by Bardon Roadstone. An application for Consent to Discharge is being processed.
R. Roch SS37	Sudden Brook, Stoneyfield. Risk of flooding to industrial properties on Valley Road due to insufficient culvert and channel capacity.	1. Initial assessment of flooding problem.	Environment Agency	Riparian owner	5		Initial assessment complete. No further work proposed.
R. Roch SS38	Millers Brook, Heywood. Risk of flooding to cricket ground due to insufficient capacity of channel.	1. Initial assessment of flooding problem.	Environment Agency	Riparian owner	5		
R. Roch SS39	Millers Brook - Roeacre Lodge to R. Roch. Lack of fishery due primarily to poor water quality.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2	-	The situation is monitored as part of 3 year rolling programme. Next survey due 1998.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Roch SS41	Cheesden Brook, Naden Brook and Old House Brook. Need to protect rivers and river corridors of highest ecological value within catchment.	1. Seek to restrict polluting activities or development which would severely constrict the river corridors. 2. Carry out strategic survey.	Environment Agency	Local Authorities	2		
R. Roch SS42	R.Roch, Heap Bridge Large bankslip upstream of Heap Bridge.	1. Remove debris from river and reinstate bank and roadway. Provide structural support to banking.	Environment Agency	Riparian owner		-	This site has now been redeveloped by B&Q and the road upgraded. No further action required.
R. Roch SS44	R.Roch - Gigg Weir at confluence with Gigg Brook. Site of demolished mill in poor structural condition.	1. Locate and persuade owners to take responsibility for works to weir.	Environment Agency	Riparian owner		-	New owners of the adjacent site are considering redevelopment options. The Agency is continuing to negotiate over repairs to the weir, pending firm redevelopment proposals.
R. Roch SS46	Brightley Brook Heywood. Flooding occurs to fishery due to insufficient flow capacity.	1. Initial assessment of flooding problem.	Environment Agency	Riparian owner	5		Initial assessment complete. No further work proposed.
R. Roch SS50	Rochdale. Six access ramps are to be provided at Rochdale on the River Spodden, River Roch, Hey Brook and Buckley Brook.	1. Construct engineering works. NB Part of River Roch comprehensive flood alleviation scheme.	Environment Agency		(see SS5)		Feasibility study complete. Design Stage 1 complete.

River Roch - New Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Roch New Issue 1	Parr Brook - downstream Sunny Bank Road. Aesthetic deterioration due to sewage litter.	1. Agree improvement scheme for unsatisfactory sewer overflow and issue appropriate consent. 2. Undertake capital scheme.	Environment Agency	NWW Ltd	2	-	Discussions have started regarding improvements.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Roch New Issue 2	Beal Valley Golf Course and Landfill.	1. Golf Course subject to exemption and landfill subject to WML condition monitoring and pollution prevention engineering as necessary.	Environment Agency				
R. Roch New Issue 3	Gort Quarry.	1. Subject to remediation and possible license application and consultation.	Environment Agency				

4.5 River Croal - Site Specific Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Croal SS1	Belmont Reservoir. Compensation requirement in excess of reliable yield.	1. Review compensation discharge.	Environment Agency	NWW Ltd			Issue has been raised with NWW Ltd. as part of post drought review.
R. Croal SS3	Eagley Brook, downstream of Belmont STW. Exceedence of the Environmental Quality Standard for an EC List II Dangerous Substance (Chromium).	1. Enforce the reduction in the chromium load from Belmont STW.	Environment Agency	NWW Ltd	2	-	A lower consent limit for chromium in the discharge from Belmont STW came into force on 1/1/95. Data for Eagley Brook downstream in 1995 complies with the EQS. Exceedences of the EQS for copper have now also been recorded. The requirement for control measures is to be evaluated.
R. Croal SS7	Eagley Brook, downstream of Eagley to Astley Brook. R.Tonge - Astley Brook to Bradshaw Brook. Poor Fishery.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2		Croal catchment surveyed summer 96. Overall improvement recorded indicative of success of 95/96 stocking with dace and barbel.
R. Croal SS11	R.Tonge - Astley Brook to Bradshaw Brook. Continued development pressure along River Tonge	1. Seek to promote provision of green corridors of recreation and conservational value within industrial development zone.	Environment Agency	Local Planning Authority	1.5	-	On going. The Environment Agency is actively involved in Bolton MBC's Millennium bid to 'green up' Bolton's river corridors.
R. Croal SS13	Bradshaw Brook - Wayoh Reservoir to Jumbles Reservoir inlet. Lack of fishery due primarily to poor water quality.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2		Croal catchment surveyed summer 96. No significant change indicated at this site. Review water quality status.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Croal SS14	Riding Gate Brook, Bradshaw. Risk of flooding to Conservative Club, restaurant and residential properties.	1. Construct flood alleviation works.			42	-	Construction works complete.
R. Croal SS21	Middle Brook. Sporadic fishery.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2		Croal catchment surveyed summer 96. No significant change indicated at this site. Review water quality status.
R. Croal SS24	Blackshaw Brook - Hall Lane tip to the R.Croal. Chromium levels causing poor quality water in this reach.	1. Continue tip remediation work.	Bolton MBC			-	A remediation plan has been produced by Bolton MBC. The possibilities for finance are now being examined. This may become a long term issue.
R. Croal SS26	Blackshaw Brook. Lack of fishery due primarily to poor water quality.	1. Monitor natural colonisation and review stocking requirements.	Environment Agency		0.2		Croal catchment surveyed summer 96. No significant change indicated at this site. Review water quality status.
R. Croal SS28	Access Ramps. Provide access ramps on the River Croal and Astley Brook at Bolton.	1. Construct engineering works.	Environment Agency		102		These ramps will now be constructed as part of the Agency's routine maintenance works as required.
R. Croal New Issue 1995	R.Tonge - Astley Brook to Bradshaw Brook. Intermittent pollution affecting aesthetic appearance.	1. Reduction in debris load from unsatisfactory overflows. 2. Agree remedial scheme and issue appropriate consents.	NWW Ltd Environment Agency		 4	- -	Discussions on improvement schemes ongoing.
R. Croal New Issue 1995	Croal Minor - Sewer overflows to Jenny Beck. Cause of aesthetic deterioration due to sewage litter, contribution to failure to achieve water quality classification objectives and impairment of aquatic fauna.	1. Reduction in organic and debris load from unsatisfactory overflows. 2. Agree remedial scheme and issue appropriate consents.	NWW Ltd Environment Agency		 4	- -	Discussions on improvement scheme ongoing.

River Croal - New Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Croal New Issue 1	Eagley Brook to R Croal at Irwell confluence. Giant Hogweed poses safety, conservation and land drainage.	1. Control and eradicate Giant Hogweed from banksides.	Environment Agency	Croal Irwell Valley Wardens	(see CW16)	-	(see CW16)
R. Croal New Issue 2	Bull Hill Tip.	1. Monitor ex licenced tip and control of capping and leachate generation. Exemption for import of inert materials to complete capping and regrading (monitor operations).	Environment Agency				
R. Croal New Issue 3	Black Shaw Brook - Hall Lane Tip.	1. Capture under contaminated land regulation (chromium contamination).	Environment Agency				

4.6 River Irk - Site Specific Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R.Irk SS1	River Irk - Cedar Grove Storm Overflow to Royton STW. Failure to achieve the proposed water quality classification objective for the classified reach.	1. Reduction in organic and debris load from three unsatisfactory sewer overflows at Cedar Grove, Spaw and Haggate. 2. Agree remedial scheme and issue consents as appropriate.	NWW Ltd Environment Agency		2	- -	A revised improvement scheme has been agreed. A consent for a new discharge has been issued. Completion of the scheme is due in early 1997.
R.Irk SS2	River Irk - Harewood Drive, Royton Flooding to houses and road.	1. Initial assessment of flooding problem.	Environment Agency		5		Initial assessment complete. No further work proposed.
R.Irk SS3	River Irk - Royton STW to Wince Brook. Failure to achieve the proposed water quality classification objective for the classified reach.	1. Reduction in the organic load from Royton STW. 2. Reduction in the organic and debris load from the unsatisfactory southern sewer overflow at Royton STW. 3. Agree remedial schemes and issue appropriate consents.	NWW Ltd NWW Ltd Environment Agency		4	- - -	The proposed water quality classification objective has been revised following consultation. 93 -95 data for the reach complied with the new proposed objective although improvements are still required for continued compliance and improvements to the aquatic fauna throughout the reach.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R.Irk SS5	Whit Brook, Middleton. Flooding to industrial premises.	1. Initial assessment of flooding problem.	Environment Agency		5		Initial assessment complete. No further work proposed.
R.Irk SS7	Wince Brook - Foxdenton Lane to the R.Irk. Failure to achieve the proposed water quality classification objective for the classified reach.	1. Reduction in the organic load from Oldham STW. 2. Reduction in organic and debris load from a number of unsatisfactory sewer overflows. 3. Agree remedial scheme and issue appropriate consents.	NWW Ltd Environment Agency		4	- - -	Discussion ongoing regarding improvements. The improvements will result in improvements to the aquatic fauna.
R.Irk SS8	River Irk, Middleton. Provide access ramps.	1. Construct engineering works.	Environment Agency		34		Construction planned for 97/98. Estimated cost: £30K.
R. Irk SS10	River Irk. River flows in straightened and "channelised" sections through e.g. Alkrington Woods, Rhodes Lodges and Blackley Forest areas.	1. Rehabilitation of river and flood plain avoiding damage to SBI's and listed structures.	Environment Agency Local Planning Authority Riparian owners		200		The project has been put on hold at the moment and is unlikely to be submitted as a multi-functional project until at least 1999.
R.Irk SS20	River Irk - Central Manchester. Urban Dereliction.	1. Support riverside regeneration initiatives including renovation of significant or historic industrial buildings, sympathetic enhancement works, debris removal etc.	Environment Agency Local Authority Voluntary Sector Mersey Basin			-	On going.

River Irk - New Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R Irk New Issue 1	R Irk at Royton. Giant Hogweed poses safety, conservation and land drainage problems.	1. Control and eradicate Giant Hogweed from site.	Environment Agency		(see CW16)	-	(see CW16)

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Irk New Issue 2	R Irk at M66 construction site. Giant Hogweed poses safety, conservation and land drainage threat to adjacent river.	1. Control and eradicate Giant Hogweed from site.	Contractor				
R. Irk New Issue 3	Boarshaw Clough. Enhancement Opportunity for public amenity.	1. Regenerate (rehabilitate) existing wetland area.	Groundwork Trust Environment Agency				On going.
R. Irk New Issue 4	Moston Brook - Alford Street and Suffolk Street sewer overflows Cause of aesthetic deterioration due to sewage litter and contribution to failure to achieve proposed water quality classification objective and impairment of aquatic fauna.	1. Reduction in organic and debris load from unsatisfactory overflows. 2. Agree remedial scheme and issue appropriate consents.	NWW Ltd Environment Agency		4	-	Discussions on improvements schemes are ongoing.
R.Irk New Issue 5	M66 Construction, Boothroyden Road. Landscape project (Landfill transfer).	1. Monitor licensing condition after partial removal of Manchester Road tip (uncontained) to new containment site. Assess background monitoring and act if triggers exceeded.	Environment Agency				
R.Irk New Issue 6	Springbrook Works - remediation.	1. WML now subject to completion criteria expect to issue soon.	Environment Agency				
R.Irk New Issue 7	Foxdenton Lane - Sewage Works, Chadderton.	1. Control pollution problems to Rochdale canal via WML conditions and engineering.	Environment Agency				

4.7 River Medlock - Site Specific Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Medlock SS1	River Medlock - Upper Strinesdale to A669. Lack of continuity of river corridor downstream of Strinesdale Reservoir.	1. Seek opportunities to enhance river corridor.	Environment Agency	Local Authorities Medlock Valley Wardens Riparian owner	2.5	-	On going.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Medlock SS2	River Medlock - Strinesdale Reservoir to the A62. Incomplete information indicating failure to achieve the proposed water quality classification objective for the classified reach.	1. Collect and review further information.	Environment Agency			-	Arrangements for data collection have been completed.
R. Medlock SS7	River Medlock - Thornley Brook (Wood Brook) to Glodwick Brook Long-standing unacceptable aesthetic conditions due to sewage debris.	1. Evaluation of performance of new sewer overflow of modern design, constructed in sewerage improvement scheme, permitting abandonment of a number of others of older design upstream. An option for further improvement may follow.	Environment Agency		1	-	The evaluation has been completed and the operation of the overflow is considered satisfactory. Issue resolved.
R. Medlock SS10	Holden Clough Brook Protection of status as key conservation feature (Grade A Site of Biological Importance).	1. Protect against unsympathetic proposals.	GMCU	Environment Agency Local Authorities Riparian owner	2	-	On going.
		2. Gather data on river corridor including biological and fisheries survey.	Environment Agency		1		Programmed to start summer 1997.
R. Medlock SS11	Lumb Brook - Railway crossing to the R. Medlock. Failure to achieve the present water quality classification objective for the classified reach.	1. Reduction in the organic and debris load from unsatisfactory sewer overflows.		NWW Ltd		-	93 - 95 data complied with the proposed objective although improvements are required for continued compliance and improvement to the aquatic fauna. 1. Discussions are ongoing regarding improvement schemes. 2. Significantly improved performance has been recorded. 3. The evaluation has been completed and the operation of the overflow is considered unsatisfactory. 4. No action as yet.
		2. Evaluation of the impact of Lumb Lane sewage pumping station following recent remedial measures.	Environment Agency			-	
		3. Evaluation of the impact of recently discovered sewer overflow near the railway crossing.	Environment Agency	NWW Ltd	3	-	
		4. Investigation of further sources of contamination of culverted sections and culverted tributaries.	Environment Agency				

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
R. Medlock SS13	Medlock - Lords Brook to R.Irwell. Failure to achieve the present water quality classification objective for the classified reach.	1. Reduce the organic and debris load from the numerous unsatisfactory sewer overflows to the reach and unclassified tributaries. 2. Reduction in the organic load from Failsworth STW.	Environment Agency Environment Agency	NWW Ltd NWW Ltd	20 4	- -	Improvements on one unsatisfactory sewer overflow almost completed. Discussions on the improvements required for the other approximately 30 unsatisfactory overflows and at Failsworth STW are ongoing. The improvements will result in an improvement to the aquatic fauna.
R. Medlock SS14	River Medlock, Clayton Vale. Poorly landscaped, deep, steep sided valley, severe vandalism. Extensive tipped areas. River corridor extensively modified in places.	1. Selective earth movement and landscaping, including some tree clearance/ thinning. 2. Removal of artificial channel features and return channel to more natural state.	Local Authority Warden Service Environment Agency	MCC EC Central Government			Feasibility study complete. Detailed design to commence 97/98. Feasibility study complete. Detailed design to commence 97/98.
R. Medlock SS15	Clayton Area. Groundwater within the Collyhurst sandstone is fully committed and may be inadequate to meet future industrial demands.	1. Carry out consultation to form basis of groundwater management policy.	Environment Agency		2		Any future proposed development will require applicant to demonstrate sustainability of resource in terms of quality and quantity on a case by case basis.
R. Medlock SS17	River Medlock - Lords Brook to R.Irwell. Pinmill Brow debris screen - debris bypassing screen at high flows. Difficult to safely clear screen.	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency	MSCC Riparian owner	30		Initial study complete. Design work depends on availability of external funding.
R. Medlock SS18	River Medlock, downstream Bradford Gas Works. Non-continuous "green corridor" between the Gas Works and Ashton New Road.	1. Promote extension of "Linear Park" through land purchase or planning gain.	Environment Agency	Local Planning Authority	1	-	On going.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD OTHER	TOTAL COST TO ENVIRON MENT AGENCY (£K)	1995 /96	PROGRESS
R. Medlock SS19	River Medlock - Lime Kiln Lane to Ashton New Road, Central Manchester. Poorly landscaped, river corridor with partially demolished or vandalised walls and structures. Severe vandalism and litter problems.	1. Promotion of open landscaped areas with attractive but substantial boundary fence. 2. Promote the repair and finish walls and other structures. 3. Increase regular wardening "presence".	Local Authority Mersey Basin Campaign Wardening Service Environment Agency As above As above	2	-	On going
R. Medlock SS20	River Medlock, Central Manchester. Urban Dereliction and access problems in Central Manchester.	1. The Environment Agency have submitted a bid to the Millennium Commission to provide recreational habitat and access improvements to the River Medlock through Central Manchester.	Environment Agency MCC Developers	1200	-	Bid to Millennium Commission unsuccessful. Other possibilities for external funding and/ or a smaller project will now be considered over the period 97/98 to 99/ 2000. Total cost £240K.
R. Medlock SS22	River Medlock at Pinmill Brow, Manchester and Philips Park. Provide access ramps	1. Construct engineering works.	Environment Agency	68		Construction planned for 97/98. Estimated cost £35K.

4.8 Lower Irwell - Site Specific Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD OTHER	TOTAL COST TO ENVIRON MENT AGENCY (£K)	1995 /96	PROGRESS
L. Irwell SS6	Clifton Valley Degraded, old industrial landscape.	1. Support the work of the LIVIA project including improvements to, and deculverting of, Slack Brook.	Environment Agency LIVIA Project Groundwork Trust Salford MCC	15	-	On going.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
L. Irwell SS9	Singleton Brook - A56 to the R. Irwell. Failure to achieve the proposed water quality classification objective for the classified reach.	1. Reduction in the organic and debris load from unsatisfactory sewer overflows. 2. Agree remedial scheme and issue appropriate consents.	NWW Ltd Environment Agency		4	- -	The proposed short term water quality classification objective has been revised. 93 - 95 data for the reach would comply with the new objective. However, the improvements are still required for continued compliance with the proposed short term objective, progress towards compliance with the proposed long term objective and improvements to the aquatic fauna. Discussions regarding the improvements are ongoing.
L. Irwell SS11	River Irwell - Lower Kersal and Lower Broughton, Salford. Flooding to large areas of Salford, including industrial and domestic properties.	1. Construct flood alleviation works.	Environment Agency		1000	-	Construction start planned for 97/98. Latest cost estimate £14.3M.
L. Irwell SS16	Trafford Park Groundwater Quality. Saline groundwater due to historic over-abstraction.	1. No significant increase in abstraction to be permitted from groundwater sources. 2. Carry out groundwater resource assessment to form basis of groundwater Management Policy.	Environment Agency			-	Any future proposed development will require applicant to demonstrate sustainability of resource in terms of quality and quantity on a case by case basis.
L. Irwell SS21	Folly Brook, Eccles. Risk of blockage to twin culverts beneath Rocky Lane, Eccles which could result in flooding.	1. Initial assessment of flooding problem.	Environment Agency Riparian owner		5		Initial assessment complete. Survey work needed to confirm extent of problem.
L. Irwell SS23	Folly Brook, Monton. Risk of flooding to property and park land.	1. Investigate options to install improved screening arrangements.	Riparian owner Environment Agency				Investigation to be carried out in 97/98.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
L. Irwell SS26	Worsley Brook, Eccles Bank slip adjacent to M63.	1. Problem highlighted to Highways Agency and City of Salford Council. Situation to be monitored.	Environment Agency	Highways Agency City of Salford		-	Monitoring is continuing.
L. Irwell SS27	Worsley Brook - River Gauging Station. Fatalities due to access problems caused by vandalism. Poor station record due to design.	1. Carry out feasibility study, select and design most favourable solution.	Environment Agency		30	-	Additional works have been carried out to reduce the size of downstream ponding. This has increased public safety at the site but data quality is still extremely poor. To be further assessed.
L. Irwell SS28	Salteye Brook, Eccles. Debris on river bank.	1. "Serve notice" to owner of scrap yard to remove debris. 2. Environment Agency removes debris and recharge owners.	Environment Agency Environment Agency	Riparian owner		- -	The owner has now completed remediation works at this site, to the Agency's satisfaction.
L. Irwell SS30	Platts Brook, Irlam and Salteye Brook, Eccles. Access Ramps.	1. Construct engineering works.	Environment Agency		68		Platts brook now removed from programme. Salteye Brook- Design work in 97/98, and construction planned for 98/99. Estimated cost £25K.
L Irwell New Issue 1995	Pomona Dock to Turning Basin, Salford Docks. Potential oxygen depletion due to action of contaminated silt.	1. Pursue with Partners need/implementation of dredging/aeration to improve aesthetic quality. Seek further funding.	MBC Central Catchment Group (comprising Environment Agency, NWW Ltd, Salford CC, Trafford BC and Manchester Ship Canal Co.)		8	-	A decision has been made to pursue dredging and aeration. Aeration trials started in August 1996. Environment Agency involvement will now continue beyond 95/96.

Lower Irwell - New Issues

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
L Irwell New Issue 1	R Irwell from Croal to Salford. Giant Hogweed poses safety, conservation and land drainage problems.	1. Control and eradicate Giant Hogweed from banksides.	Environment Agency NWW Ltd	Croal Irwell Valley Wardens	(see CW16)	-	(see CW16)
L Irwell New Issue 2	Kempnough Brook, Worsley Giant Hogweed poses safety, conservation and land drainage problems.	1. Control and eradicate Giant Hogweed from banksides.	Salford MBC Environment Agency		(see CW16)	-	(see CW16)
L Irwell New Issue 3	M61/M62 interchange. Non-waterside population of Giant Hogweed poses safety and conservation threat to local river system.	1. Control and eradicate Giant Hogweed from roadside.	Highways Agency				
L Irwell New Issue 4	Ellenbrook, Worsley. Non-waterside population of Giant Hogweed poses safety and conservation threat to local river system.	1. Control and eradicate Giant Hogweed from roadside.	Salford MBC				
L Irwell New Issue 5	Folly Brook - former Swinton STW to Worsley Brook. Failure to achieve the proposed water quality classification objective for the classified reach, impairment of the aquatic fauna and poor aesthetic appearance.	1. Reduction in organic and debris load from unsatisfactory sewer overflows. 2. Agree remedial schemes and issue consents as appropriate.	NWW Ltd Environment Agency		10	- -	Discussions regarding improvements are ongoing.

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
L Irwell New Issue 6	Kempnough Brook - upstream of Old Warke Dam . Aesthetic deterioration due to discolouration, deposited debris and sewage fungus arising from storm sewage discharges.	1. Reduction in organic and debris load from the unsatisfactory sewer overflow at Atkins St. 2. Agree remedial scheme and issue consent as appropriate.	NWW Ltd Environment Agency		2		Discussions regarding improvements not yet started.
L Irwell New Issue 7	Prestwich Clough Brook. Aesthetic deterioration due to discolouration and deposited debris arising from storm sewage discharges.	1. Reduction in organic and debris load from an unsatisfactory sewer overflow. 2. Agree remedial scheme and issue consent as appropriate.	NWW Ltd Environment Agency		2	- -	Agreement has been reached on an improvement scheme.
L Irwell New Issue 8	Bridgewater Canal Boothstown to Barton. Aesthetic deterioration due to ochre.	1. Gather information on impact and pursue consideration within national minewaters remediation proposals by Coal Authority.	Environment Agency		2		
L Irwell New Issue 9	Clifton Valley Lumms Lane i) Magnesium Elekton.	1. WML subject to Reg 15 investigation assess and act on information as necessary.	Environment Agency				
L Irwell New Issue 10	ii) Biffa Containment Site (ex Coal Board waste mining tip).	1. Licensed site, monitor for pollution and act under license condition as necessary (containment site).	Environment Agency				
L Irwell New Issue 11	iii) Ex CEGB Ash tip rear of Thermalite Brick Works.	1. WML for inert material import. Monitor background and act under WML condition to assist in LIVIA project - decrease infiltration to groundwater and improve Irwell corridor.	Environment Agency				
L Irwell New Issue 12	iv) Old Lumms Lane / Carrington Road tip.	1. Expect capture in contaminated land regulations.	Environment Agency				

No.	ISSUES	ACTIONS	RESPONSIBILITY LEAD	RESPONSIBILITY OTHER	TOTAL COST TO ENVIRONMENT AGENCY (£K)	1995/96	PROGRESS
L Irwell New Issue 13	Davyhulme STW.	1. Consideration of application for containment landfill to decrease pollution loading on ground water.	Environment Agency				
L Irwell New Issue 14	Salteye Brook Scrap Yard Old Eccles STW, Salford City Landscape (ex) Composting.	1. Application for Scrap Yard license, control pollution from Drain Crushing and Waste Transfer Activities and composting.	Environment Agency				
L Irwell New Issue 15	Pomona Docks regeneration (New road and tram system).	1. Exemption application to control impact of contaminated land areas by capping under new structures.	Environment Agency				
L Irwell New Issue 16	North Bank Industrial Estate, Irlam.	1. Control potential pollution under WML condition for remediated sites/deposits to decrease pollution loading on ground water.	Environment Agency				
L Irwell New Issue 17	Peaks Nook, Carrington.	1. Control deposits of inert wastes under WML conditions.	Environment Agency				

5. Appendices

Appendix 1

Overview of the Catchment

Description

The River Irwell catchment has a population of 1,533,000 and includes the Cities of Manchester and Salford. The catchment is densely urban and industrial, covering an area of 793 km^2. The River Irwell rises on Deerplay Moor, near Bacup, in open moorland before winding its way south towards Manchester, being joined by the Rivers Roch, Croal, Irk and Medlock on route. Only the upper reaches of the catchment are rural in character. All the major tributaries drain urban and industrial areas; the Irk and the Medlock flow through the centre of Manchester.

There are a range of environmental initiatives to improve the catchment area which the Environment Agency supports. These include the Mersey Basin Campaign, Streamcare, the Red Rose Community Forest Initiative and the LIVIA Project.

The Upper Irwell is valued as an area of amenity and conservation because much of the catchment is subject to considerable development pressures. Through catchment management planning the Environment Agency will endeavour to continue to work together with NWW Ltd., Local Authorities, Industrialists and Landowners to improve our water environment.

Catchment Uses

Flood Defence

The Irwell Catchment has 363 Kilometres of "main river" which principally flow through the heavily urbanised areas of Manchester, Salford, Bolton, Bury and Rochdale.

Regular inspections of channels and structures are carried out to safeguard the existing standards of flood protection especially in the urbanised areas. Maintenance work includes clearing debris from channels, culverts, bridges and debris screens as well as de-silting and dredging works.

Due to the heavy urbanisation and the legacy of the Industrial Revolution throughout the Catchment many stretches of river are culverted or channelled. In the Roch Catchment these factors result in development occurring over the rivers, with much of the river culverted especially in Rochdale. Similar problems occur on the River Croal as it flows through Bolton, the River Irk through Royton, Middleton and near its confluence with the River Irwell under Victoria Station, Manchester. The River Medlock from Pinmill Brow to its confluence with the River Irwell is predominantly in culvert or tunnel through Manchester City Centre, and where it flows in the open, the river banks are formed by high retaining walls or by the walls of buildings. This problem is often made worse by dilapidated channel walls collapsing into the river, with hard-core then being carried downstream and often deposited inside culverts or where access to the river with heavy plant is difficult or impossible. Many of the tributaries of the River Irk and the Lower Irwell are also culverted.

The Environment Agency is successfully pursuing a policy of increased access to the river corridor as part of the redevelopment proposals.

There are localised areas at risk of flooding throughout the Catchment. The regular maintenance works together with the capital schemes identified in the Action Plans should reduce flood risk to a minimum.

Water Quality

Some reaches of the catchment are of poor water quality. Discharges from North West Water Ltd. Sewage Treatment Works and from the sewerage networks associated with them are the main cause of the poor quality of the rivers. There are 13 principal Sewage Treatment Works in the Irwell Catchment as well as many smaller Treatment Works. In addition there are over 610 combined sewer overflows, the greatest concentration being in the Lower Irwell with over 140. There are also over 100 combined sewer overflows in the Croal and Irk Catchments. Discharges of trade effluent direct to river after treatment rather than to sewer, generally have more localised impact. There are a number of direct trade effluent discharges in the Lower Irwell Sub-Catchment.

Ochreous land drainage and runoff from contaminated land areas has a very marked impact on the River Roch and widespread localised impact elsewhere.

Other sources of pollution are natural acidic runoff in the headwaters, runoff from farms, motorways and industrial sites, and discharges from small sewage treatment plants. These all have a localised impact of pollution.

Storm runoff from streets and domestic and commercial properties have a significant influence as well as storm drains contaminated with domestic foul water.

The Lower Irwell suffers from the poor water quality of the other sub-catchments draining to it.

River Ecosystem River Quality Objectives (RQOs) were proposed for the Irwell catchment for the first time in the Water Quality Supplement to the Action Plan. The first year of the plan until this Annual Review has been viewed as a consultation on those proposals. A number of comments have been received and additional data collected since the initial assessment. As a result of this a number of changes to the original proposals for short and long term RQOs have been made. These are documented in Appendix 6.

Water Service Company Funding Plans

Schemes under Asset Management Plan 2 (AMP2) for water quality improvements are under way. Progress on individual schemes has been reported under several issues. Discussions regarding a further spending plan, AMP3 have started.

Water Abstractions

There are only six groundwater sources used for public water supply within the Irwell Catchment associated with the Millstone Grits, and 14 major surface water abstractions for public supply. These amount to 4,147 Ml/y and 71,319 Ml/y respectively all from the Upper Irwell, Roch and Croal Sub-Catchments. Although there are no public water abstractions within the Irk, Medlock and Lower Irwell Sub-Catchments, it should be borne in mind that many private sources are used for domestic supply.

There are 187 abstractions used for industrial purposes totalling 111,992 Ml/y. On average only 10% of these abstractions are from groundwater, the exception being the Irk Sub-Catchment which abstracts 73% mainly from the major Permo-Triassic aquifer.

There are 101 abstractions used for agricultural purposes, totalling 257 Ml/y mainly in the Upper Irwell and Roch Sub-Catchments. Again, only groundwater is used for agricultural purposes in the Irk Sub-Catchment.

Very little water is used for spray irrigation, accounting for only 22 abstractions which reflects the industrial and urbanised nature of the Irwell Catchment.

There is very little abstraction from the Irk, Medlock and Lower Irwell Sub-Catchments for agricultural or spray irrigation purposes, this possibly reflects the poor water quality of these rivers and their tributaries. In the Lower Irwell 92% of the abstraction is from the Manchester Ship Canal and the Bridgewater Canal, there being very little use of the natural surface water resources within the catchment. The majority of abstraction takes place in the Trafford Park area.

Development

Land use planning matters are primarily the responsibility of County and District Councils. However, the Environment Agency is a statutory consultee in the planning process and can play a key role in influencing such matters. (See Land Use and the Water Environment Section).

Due to the urbanised and residential nature of the catchment, increasing pressure on development is resisted along the river valley corridors, as they are recognised for their open land value.

Fisheries

The River Irwell, because of its physical nature and river quality, was a prime salmon river up until the last century. The construction of the Manchester Ship Canal, industrialisation and consequent deterioration in water quality have caused many of the tributaries and river stretches to now have few fish or are devoid of fish altogether. Where possible, with the improvement in water quality, provision for the passage of fish over weirs and through culverts.

Over the last decade due to general improvement in water quality, fish have begun a natural re-colonisation. This is particularly true in the Upper Irwell where brown trout are breeding throughout the Sub-Catchment, with some coarse fish populations lower downstream.

The Roch, Croal, Medlock and Irk Sub-Catchments have the potential to be a Trout fishery in their upper reaches and a mixed fishery in their lower reaches, but due to the water quality problems either by organic pollution or intermittent polluting discharges, fish populations are restricted.

The River Irwell generally maintains populations of coarse fish which is consistent with the physical habitats present. However, these are susceptible to intermittent pollution events. The main fish species are roach, with some chub, bream and pike, with some brown trout in the upper reaches. Anglers have good catches of coarse fish through Ringley and Radcliffe.

Landfill and Solid Waste Disposal

The Environment Agency is a statutory consultee on Waste Disposal matters. A wide range of waste disposal operations require a Waste Disposal Licence including scrap yards, transfer stations, incinerators and waste storage.

There are 34 operational landfill sites within the Irwell Catchment and considerably more old disused sites, many of which are not documented and may be causing some pollution. Any existing operational and proposed landfill sites must specify engineering measures to minimise the potential for any leachate generated to escape. In addition, a regular monitoring regime is undertaken to ensure containment.

Mineral Extraction

Throughout the Irwell Catchment mineral extraction is very difficult to quantify as it has been extensive and largely unrecorded. There has been extensive underground mine-workings for the extraction of coal, as well as other minerals on a much smaller scale. There has also been extensive sandstone extraction from underground workings in the Rawtenstall area.

Mineral extraction via surface mining has also been extensive and widespread throughout the Irwell Catchment. These workings have mainly been in the form of clay or marl pits, sand and gravel pits, sandstone quarries in outcrop areas and occasional shale pits. There are substantial sites of mine waste dumps to be found on low-lying ground to the south of Oldham. Within heavily urbanised areas, such as in the Lower Irwell Sub-Catchment, surface mineral workings have been localised because of the nature of the Catchment.

Many old mine workings have been filled, often with waste from a variety of sources.

Conservation

There are several rivers of very high conservation value within the Catchment. They are most unspoilt near the high open moorland in the upper reaches. Wooded valleys, cloughs and wetlands are associated with a number of rivers. For example, Cheesden Brook and Naden Brook in the River Roch Sub-Catchment which are designated Grade A Sites of Biological Importance (SBI's). There are a large number of reservoirs, old mill lodges and ponds in the Catchment which are of conservation value, for example, the Kirklees Valley.

Rivers provide essential wildlife corridors especially in the City Centre where the rivers are channelised. In the urban areas especially in the Irk Sub-Catchment, the green corridors associated with many of the watercourses may be the only open space for people and wildlife. A larger number of watercourses have been seriously degraded and fragmented during urban development, due to culverting, infilling valleys, tipping on flood plains, debris in the river channels and building to the waters edge. Extensive natural regeneration and tree planting have masked some of the destructive efforts of historical industry. Nob End SSSI, in the Upper Irwell Sub-Catchment is a good example of an old waste tip which has naturally developed a rich lime-loving flora.

In the Croal Sub-Catchment there are a higher diversity of invertebrates than elsewhere in the Catchment and there is a variety of organisms present including some pollution sensitive species.

Many foreign plants were introduced to Britain in the 19th century, mainly for ornamental reasons. A few have become aggressively dominant, creating serious problems in some areas. Three such invasive plants are Japanese Knotweed, Giant Hogweed and Himalayan Balsam. Giant Hogweed, which poses a serious health hazard, is a particular problem in the Croal Catchment.

Landscape and Heritage

The value of open land within the river valleys has been identified throughout the Irwell Catchment as an important landscape resource for a predominately urban area. In the Upper Irwell, Roch and Medlock Sub-Catchments, the open landscape, mainly moorland, are designated as Special Landscape Areas.

River character is influenced by past and present land-use. In the Roch Sub-Catchment the countryside landscape may change due to the decline of agriculture in the area. The promotion of woodland planting schemes will be encouraged. Mill buildings and weirs are a typical landscape feature reflecting Rochdale's importance in the textile industry. There are also Sites of Ancient Monuments.

The Croal Sub-Catchment has distinct river valleys with diverse landscapes from upland moorland to low lying farmland intersected by sandstone ridges. The river valleys have a high amenity value with 25 Areas of Special Landscape Value or Green Belt. The Croal Valley has been separately identified for conservation and enhancement under the Croal - Irwell Valley Plan. Bradshaw Brook maintains a high amenity value into the built up area.

The Irk Sub-Catchment is predominantly built-up with just a few public open spaces, for example, Heaton Park, with only one Special Landscape Area and no Scheduled Ancient Monuments. Heaton Park is listed on the Historic Parks and Gardens register.

Much of east Manchester's open space lies within the Medlock Valley, Daisy Nook Country Park being part of the Greater Manchester Green Belt. There are plans to extend the Green Belt closer to the city by upgrading Philips Park and including Clayton Vale, a former industrial site where the character of the river valley changes noticeably from rural to urban fringe. The Lower Irwell is the most developed Sub-Catchment within the Irwell Catchment area and shows the pressures of past and present land uses. There are many opportunities for enhancement with the redevelopment of sites, for example, alongside the Manchester Ship Canal.

Support will be given to riverside regeneration initiatives including renovation of historical buildings especially if they include the provision of riverside walkways and use local or natural materials.

Recreation and Amenity

There has been an increase in leisure demand for water sports and outdoor recreation. The water environment forms an important component of many leisure activities such as angling, canoeing, boating, rowing, sailing and bird-watching. Activities such as rambling, orienteering, horse riding and picnicking bring the public into close proximity with the water environment. Within the Irwell Catchment there are many areas of amenity and recreation activity. However, in the highly industrialised and urban areas recreation is often limited to pockets of open space.

The Irwell Valley Way and the Medlock Valley Way are long distance footpaths which follow the river valley, but in the Irk Sub-Catchment access by foot varies along the watercourses and is often limited. In the Upper Irwell Sub-Catchment a canoe slalom course is available at Burrs Mill, Ramsbottom.

Reservoirs are used for boating, sailing, rowing and wind surfing. Boating also takes place on canals and rowing on the River Irwell at Agecroft. Golf courses and small sports grounds, bowling greens and cricket grounds adjacent to watercourses are available in the River Irk Sub-Catchment. Clifton Country Park is adjacent to the right bank of the Lower Irwell and provides woodland walks, industrial archaeology, angling, orienteering, horse riding and cycling. There is also a cycle track and public footpath which follows the Manchester Ship Canal. Still waters and canal lengths throughout the Catchment are used for angling, pond dipping and general educational uses.

Navigation

Navigation relates to waterways for which there is a public right of passage for boat traffic. Navigation is limited in the Irwell Catchment being on canals and in the extreme lower reaches of the Irwell before it enters the Manchester Ship Canal.

Land Use and the Water Environment

Land Use and resource management have a major impact on the water environment. However, while the Environment Agency is well placed to influence some of the factors affecting the water environment, particularly in relation to the river corridor itself, it has no direct control over the mechanisms which determine land use change on a catchment wide basis. This is largely the responsibility of local planning authorities through the implementation of the Town and Country Planning Acts.

The policies in statutory development plans are important in this regard in that they set out the framework for land use change, and provide the key reference in determining development implications; the Environment Agency encourages the inclusion of policies which reflect its concerns and responsibilities.

The role of planning authorities in determining development of the urban and rural environment and its subsequent impact on the water environment cannot be overstated.

The local planning authorities are responsible for the determination of land use changes and promoting forward planning policies. As a statutory consultee the Environment Agency provides local planning authorities with guidance statements to assist them in formulating policies for inclusion in their plans which reflect the Environment Agency's concerns and responsibilities including the statutory requirement to conserve and enhance the water environment and associated lands. Addressing water issues will assist the formulation of settlement strategies, the location, attractiveness and sustainability of developments. It will also improve the quality of policies for landscape, nature and urban conservation, recreation and tourism. Plans sensitive to water matters will be protecting and enhancing a vital natural resource and the surrounding environment.

To guide local authorities, the Environment Agency has prepared a set of statements relating to the broad headings of water quality and water resources, flood defence, fisheries, conservation, recreation and navigation in the river corridor and mineral workings and waste disposal.

These statements are summarised in the Environment Agency's "Guidance Notes for Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans". The Catchment Management Plan set out issues and actions specific to this catchment which have been agreed within the framework of these Guidance Notes.

Involvement by the Environment Agency in the production of local, strategic and national plans is vital to the well being of the water environment. Catchment Management Plans, and their successors Local Environment Agency Plans, outlining the Environment Agency's vision for sustainable development will help focus this process and promote close liaison with development bodies.

New Development, R. Irwell, Central Manchester

Appendix 2

Catchment Facts

Total Area	793 km^2
Population	1,533,000

Administrative Details

District Councils:- Manchester City Council
Salford City Council
Bolton Metropolitan Borough Council
Bury Metropolitan Borough Council
Tameside Metropolitan Borough Council
Trafford Metropolitan Borough Council
Oldham Metropolitan Borough Council
Rochdale Metropolitan Borough Council
Blackburn District Council
Rossendale District Council

Water Resources

Largest Abstraction 173 Ml/d

Average Annual Rainfall 1200 mm

Rainfall ranges from 1554mm at Springs Reservoir near Bolton, to 855mm at Weaste in Salford (Based on 1961 - 90 Average)

Flood Protection

Length of Designated "Main River" Watercourses:- 362.54 km
(maintained by Environment Agency)

Water Quality

Length of classified river:- 327 km

Fisheries

Length of trout fishery:- 96 km
Coarse fishery:- 36 km

Conservation

Number of Sites of Special Scientific Interest (SSSI):- 17 (+1 proposed)
Number of Site of Biological Importance (SBI):- 367 (excluding Blackburn)
N.B. Blackburn sites not available.

Heritage Sites

Number of Scheduled Ancient Monuments (SAM's): 12
Number of Conservation Areas: 43
Number of Historic Parks and Gardens: 2

N.B. These figures are for designated sites located near to "main river" and, therefore, do not include all sites within the catchment boundary.

Appendix 3

Glossary

Abstraction Licence	A licence to abstract water issued by the Environment Agency. The maximum annual, daily, and hourly abstraction rates are normally set within the terms of the licence.
Bed	The bottom of a river.
Bed Control	Stable river bed which limits the movement of bed materials.
Channel	A cutting in land along which a river flows.
Confluence	Point where two, or more, rivers meet.
Clough	A small steep sided river valley.
Compensation Water	Water released from a reservoir to maintain the flow required in the river.
Culvert	A man-made structure, for example a pipe, carrying a watercourse underground.
Eutrophication	Enrichment of water by nutrients causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned.
Fauna	Animal life.
Flora	Plant life
Freshwater Fish	For the purpose of the Salmon and Freshwater Fisheries Act 1975, fish other than salmon, brown trout, sea trout, rainbow trout and char.
Geomorphological Features	Physical features of a river, which include meandering (winding) channel, gravel beds and shoals, ox-bows, earth cliffs and river terraces.
Invertebrate	Animal without a backbone for example insects.
Load	A measure of the material carried by a river either in suspension or as dissolved material.
Main River	Some, but not all, watercourses are designated as Main River. Main River status of a watercourse must first be approved by MAFF. The Environment Agency has the power to carry out works to improve drainage or protect land and property against flooding on watercourses designated as Main River.
Marginal	At the water's edge.
Nutrients	Providing or contributing nourishment.
Ochre	Iron based orange discolouration.
Pasture	Semi-improved and improved grazed grassland.
Riparian	Of, or on, the banks of a river.
Riparian Owner	Owner of land abutting a river or lake. Normally riparian owners own the bed of river to the mid point of the channel.
River Corridor	Stretch of river including its banks and the land close by.
Salmonids	Fish classified as belonging to the Salmon family, such as Salmon, Trout and Char.
Shoal	A sand and/or gravel deposit at the edge of or within river channel.

Appendix 4

Abbreviations

AOD	-	Above ordnance datum
AMP2	-	Asset Management Plan
BC	-	Borough Council
CC	-	City Council
CEGB	-	Central Electricity Generating Board
CMP	-	Catchment Management Plan
EC	-	European Community
EQS	-	Environmental Quality Standard
GMCU	-	Greater Manchester Countryside Unit
HMIP	-	Her Majesty's Inspectorate of Pollution
IPC	-	Integrated Pollution Control
LA21	-	Local Agenda 21
LEAP	-	Local Environment Agency Plan
LIVIA	-	Lower Irwell Valley Integrated Action
LPA	-	Local Planning Authority
MAFF	-	Ministry of Agriculture Fisheries and Food
MBC	-	Metropolitan Borough Council
MCC	-	Manchester City Council
Ml/y	-	Megalitres per year
MSCC	-	Manchester Ship Canal Company
NRA	-	National Rivers Authority
NWW Ltd	-	North West Water Limited
QSL	-	Quality Survey Limit
RQO	-	River Quality Objective
SBI	-	Site of Biological Importance
SSSI	-	Site of Special Scientific Interest
STW	-	Sewage Treatment Works (also referred to as Waste Water Treatment Works)
WML	-	Waste Management Licence
WRA	-	Waste Regulation Authorities

Appendix 5

Issues omitted from the First Annual Review

The following issues are to be undertaken as routine work:

Upper Irwell

SS10 **Limy Water, Constable Lee, Rawtenstall.** Flooding to 40 houses and road.

SS28 **Kirklees Brook, Woodhill.** Flooding to industrial units caused by silting of two culverts.

SS29 **Irwell, Bury.** Tipping problem upstream of Bolton Street Bridge.

SS32 **River Irwell, Bury to Radcliffe.** Large amounts of material deposited in river bed.

River Roch

SS24 **River Roch and River Beal.** Widespread tipping.

SS31 **River Roch, Rochdale.** Risk of flooding due to insufficient capacity of bridge structures in town centre.

River Croal

SS9 **Astley Brook (Dean Brook), Bolton.** Continued maintenance to brook to remove shoals.

SS18 **Middle Brook, Bolton.** Continued maintenance to channel.

SS22 **River Croal, Bolton.** General Maintenance works required between Bolton and confluence with the River Irwell.

River Irk

SS6 **River Irk, Middleton Town Centre.** Siltation Problem.

SS12 **River Irk, Delaunays Road, Blackley.** Siltation of ICI, Hexagon Tower culvert.

SS14 **River Irk, Hendam Vale.** Maintenance required to maintain the existing level of flood protection.

SS17 **Moston Brook, Collyhurst.** Frequent heavy maintenance is required to the lower reaches of Moston Brook, to maintain the existing level of flood protection.

SS18 **River Irk - Red Bank, Collyhurst Road to Don Mintex, Hendon Vale.** Maintenance works are required to maintain the existing level of flood protection.

River Medlock

SS5 **Thornley Brook (Wood Brook), Grotton.** Grotton Hollow Estate head of culvert prone to blockages during flood flows.

SS6 **Thornley Brook (Wood Brook), Grotton.** Flood risk due to unstable bank downstream of culvert at Grotton Hollow Estate.

SS16 **River Medlock, Philips Park.** Loss of natural river channel through Philips Park Area, cemetery and downstream of Clayton Vale.

Lower Irwell

SS10	**Singleton Brook, Prestwich.** Risk of flooding to factory units.
SS22	**Folly Brook, Monton**. Risk of flooding to Worsley Golf Club.
SS24	**Folly Brook, Eccles.** Access problems between Parrin Lane and Napier Road.

Water Quality Issues:

Upper Irwell

SS3	**Cowpe Brook - Higher Boarsgreave to the River Irwell.** Failure to achieve the proposed water quality classification objective for the classified reach.
	Review of data. No issue in terms of River Ecosystem RQO. Impact of permethrin now incorporated in SS4.
SS31	**Elton Brook - Dow Lane to River Irwell.** Failure to achieve the proposed classification objective for the classified reach.
	Review of data.

Croal

SS23	**Blackshaw Brook - Red Bridge to Hall Lane Tip.** Failure to achieve the present water quality classification objective for the classified reach.
	Review of data.
New Issue	**Bradshaw Brook - Jumbles Reservoir inlet to Bradshaw Brow.** Failure to achieve proposed water quality classification objective.
	Review of data. The RQOs have also been tightened.

Lower Irwell

SS14	**Corn Brook - Openshaw to the Manchester Ship Canal.** Failure to achieve the proposed water quality classification objective for the classified reach.
	Water quality classification objective reviewed and no short - term RQO now set. See also Appendix 6.
SS15	**Manchester Ship Canal - Salford Docks to the River Mersey.** Failure to achieve the proposed water quality classification objective for the classified reach.
	Water quality classification objective reviewed and no short - term RQO now set. See also Appendix 6.

Appendix 6

Changes to Proposed Short-Term River Ecosystem RQOs

RIVER	STRETCH	ACTION PLAN PROPOSED SHORT-TERM RE RQO	REVISED SHORT-TERM RE RQO	REASON FOR CHANGE
Limy Water	QSL at Clow Bridge to Loveclough	RE2(1995)	RE4(1995)	Intermittent pollution of unknown origin became more apparent during 1995. Revised objective reflects this and protects against deterioration.
Limy Water	Loveclough to Irwell	RE2(1995)	RE3(1995)	Some implications from the upstream reach. Also now perceived that the Action Plan proposal may not be achievable consistently given the areas of road and housing draining to the brook.
Irwell	Chest Wheel Bridge to Roch	RE4(1995)	RE3(1995)	RE3 is now perceived as consistently achievable in the short-term.
Irwell	Rossendale STW to Chest Wheel Bridge	RE4(1995)	RE3(1995)	RE3 is now perceived as consistently achievable in the short-term.
Irwell	Whitewell Bk. to Rossendale STW	RE4(1995)	RE2(1995)	RE2 is now perceived as consistently achievable.
Irwell	QSL at Deerplay to Whitewell Bk.	RE3(1995)	RE2(1995)	RE2 is now perceived as consistently achievable in the short-term.
Pigs Lee Bk.	QSL AT A56 to Irwell	RE5(1995)	RE3(1995)	Recognising significant improvements in water quality since the Action Plan assessment period.
Lydgate Bk.	Ochre Stream to Roch		RE2(1995)	Data is now available to make the assessment. Data for pH may have to be set aside in the future because it is affected by drainage for which there is currently no practical solution.
Beal	QSL at Royton Sidings to Piethorn Bk.	RE2(1995)	RE4(1995)	Review of data. Additional data indicates that RE2 and RE3 cannot be consistently achieved and this reflects the urban and industrial nature of the catchment.

RIVER	STRETCH	ACTION PLAN PROPOSED SHORT-TERM RE RQO	REVISED SHORT-TERM RE RQO	REASON FOR CHANGE
Sudden Brook	QSL at Balderstone to Roch	RE3(1995)	RE4(1995)	Additional data has indicated that RE3 cannot be consistently achieved in the short-term.
Roch	Rochdale STW to Irwell	RE5(1998)	RE5(1995)	Change of date recognising that complies with RE5 now.
Naden Bk.	QSL at Doctor Dam to Cheesen Bk.	RE5(1995)	RE2(1995)	Additional data has indicated that consistent compliance with RE2 is now possible particularly with the closure of a problem industrial site. Compliance assessment is based on 2 years (1994/1995) data only.
Roch	QSL at Chelburn Resvr. Trib to Summit	RE5(1995)	RE2(1995)	In a review of the low pH values which prevent compliance with an RQO of higher quality than RE5, because these arise from natural sources this parameter is to be set aside to ensure continued control of other parameters.
Whittle BK.	QSL at Birch Services Trib. to Roch	RE5(1995)	RE3(1995)	Review of data.
Astley Bk.	A666 to Eagley Bk.	RE4(1995)	RE3(1995)	Review of data. Recognising significant improvements in water quality since the Action Plan assessment.
Tonge	Astley Bk. to Bradshaw Bk.	RE3(2001)	RE3(1995)	Significant improvement in water quality since the Action Plan assessment period. Improvements to unsatisfactory overflows affecting the reach in NWW Ltd's current programme are mainly in terms of debris rather than organic load.
Captains Clough	QSL at Doffcocker Lodge to Middle Brook	RE4(1995)	RE4(2006)	A review of data has indicated although currently achieving RE4 this may not be consistent until completion of the sewerage improvements at present scheduled for years 2000-2005.
Croal	Croal Minor to Irwell	RE3(1995)	RE4(1995)	Additional data indicates RE3 cannot be consistently achieved in the short term. Sewerage improvements are planned in the catchment but it is not certain at this stage that they will result in consistent achievement of RE3.

RIVER	STRETCH	ACTION PLAN PROPOSED SHORT-TERM RE RQO	REVISED SHORT-TERM RE RQO	REASON FOR CHANGE
Bradshaw Bk.	Jumbles Resvr. inlet to Bradshaw Brow	RE4(1995)	RE2(1995)	Review of data. One a typical result affecting previous assessment.
Blackshaw Bk.	QSL at Red Bridge to HallLane Tip	RE2(2001)	RE2(1995)	Review of data and effect of improvements. Improvements on sewer overflow now scheduled for years 2000-2005 and would have most effect on downstream reach. RE2 considered achievable objective for upstream.
Croal Minor	Captains Clough to Croal	RE5(2001)	RE4(2006)	Review of planned improvements. All upstream sewerage improvements currently due to be completed by 2006. Replacing stepping stone RQO of consistent achievement of RE5 by 2001 relating to resolution of some overflow problems.
Irk	Royton STW to Wince Brook	RE3(2001)	RE4(1995)	Review of effects of improvements. Commitment on expenditure limited to achievement of RE4.
Irk	Cedar Grove SSO to Royton STW	RE3(2001)	RE3(1997)	Change of compliance date. Improvement plans for unsatisfactory sewer overflows finalised.
Irk	Wince Brook to Moston Brook	RE3(2006)	RE4(2006)	Review of the effects of upstream improvements. No certainty that self purification will result in RE3 although still a long-term aspiration.
Medlock	QSL at Upper Strinesdale to Strinesdale	RE1(1995)	RE2(1995)	Additional data indicates that RE1 is not consistently achievable. Such inputs as run-off from roads and discharges from septic tanks in the catchment could account for this.
Singing Clough Bk.	QSL at Worsley Road to Irwell	RE5(2006)	No short term RQO	Review of data. Indications are that sources other than the unsatisfactory sewer overflows due to be improved in the period 2000-2005 would prevent achievement of RE5.
Unity Bk.	QSL at Moss Lane to Irwell	RE5(1995)	No short term RQO	Review of data. Indications that RE5 cannot be consistently achieved in the short-term.

RIVER	STRETCH	ACTION PLAN PROPOSED SHORT-TERM RE RQO	REVISED SHORT-TERM RE RQO	REASON FOR CHANGE
Singleton Bk.	QSL at A56 to Irwell	RE4(2001)	RE5(2001)	Review of data. Although significant improvements are expected as a result of sewerage schemes other sources of pollution will still prevent achievement of RE4 in the short-term.
Corn Bk.	QSL at Openshaw to MSC	RE4(2001)	No short-term RQO	Review of data and expected improvements. Sewerage scheme now deferred to 2000-2005. No commitment on other sources of pollution.
Folly Bk.	QSL at Swinton STW to Worsley Bk.	RE3(1995)	RE4(2001)	Review of data and predicted effects of improvements. Current quality possibly worse than previously assessed. Sewerage improvements should achieve RE4.
Worsley Bk.	QSL at Folly Brook to Eccles STW	RE4(1995)	RE4(2001)	Review of data. Risk of failure of RE4 until sewerage improvements completed.
Worsley Bk.	Eccles STW to MSC	RE5(1995)	RE5(2006)	Review of data. RE5 cannot be consistently achieved until completion of sewerage improvements.
Irwell	Roch to Salford University	RE4(2006)	RE5(1995)	Review of the predicted effects of committed improvements. Will not result in RE4.
Manchester Ship Canal	Salford Docks to Mersey	RE5(2001)	No short-term RQO	Review of the predicted effects of committed expenditure. Although very significant improvements are taking place these will not result in achievement of RE5 particularly in terms of the dissolved oxygen standard.

short-term river ecosystem RQOs

Changes to Proposed Long-Term River Ecosystem RQOs

RIVER	STRETCH	ACTION PLAN PROPOSED LONG-TERM RE RQO	REVISED LONG-TERM RE RQO	REASON FOR CHANGE
Whitewell Bk.	QSL Clough Bottom to Shawclough Bk.	RE1	RE2	Review of data. RE1 is not perceived as a consistently achievable objective. Areas of road, housing and industry drain to the brook and several storm sewer overflows have outfalls to it.
Irwell	Whitewell Bk. to Rossendale STW	RE4	RE2	As for short-term RQO RE2 is now perceived as consistently achievable.
Whitewell Bk.	Shawclough Bk. to Irwell	RE1	RE2	Review of data. RE1 is not perceived as a consistently achievable objective. Areas of road, housing and industry drain to the brook and storm sewer overflows have outfalls to it.
Limy Water	Loveclough to Irwell	RE2	RE3	Review of data. As with short-term RQO RE2 may not be achievable consistently given the areas of road and housing draining to the brook.
Swinnel Bk.	QSL at Hud Hey to Ogden	RE4	RE3	Review of data. RE3 is perceived as an achievable long-term objective although may not be achieved consistently in the short term. This objective may be reviewed in the future with a detailed assessment of costs and benefits.
Ogden	Swinnel Bk. to Irwell	RE2	RE3	Review of data. RE2 may not be consistently achievable particularly given the quality of Swinnel Brook.
Pigs Lee Bk.	QSL at A56 to Irwell	RE4	RE3	RE3 is currently being achieved due to significant water quality improvements and it is perceived that this can be achieved consistently in the long term.
Lydgate Bk.	Ochre Stream to Roch		RE2	Data now available to make the assessment. Data for pH may have to be set aside in the future because it is affected by drainage for which there is currently no practical solution.

RIVER	STRETCH	ACTION PLAN PROPOSED LONG-TERM RE RQO	REVISED LONG-TERM RE RQO	REASON FOR CHANGE
Beal	QSL at Royton Sidings to Piethorn Bk.	RE2	RE3	There are indications that RE2 cannot be consistently achieved in the long term although it is hoped that RE3 might be. This reflects the urban and industrial nature of the catchment.
Piethorn Bk.	QSL Head Piethorn Resvr. to Ogden Resvr.	RE2	RE1	Cause of current problems unknown. No known reason why RE1 should not be achievable in the long term.
Stanney Bk.	QSL at Newbold to Roch	RE4	RE3	Review of data. Following resolution of contaminated land and sewer overflow problems RE3 should be achievable. This objective may be reviewed in the future with a detailed assessment of costs and benefits.
Roch	Stanney Bk. to Rochdale STW	RE4	RE3	Review of data. Compliant with RE3 on 93/95 data. Could be consistently in the long term.
Roch	Rochdale STW to Irwell	RE4	RE3	RE3 is perceived as an achievable objective. This objective may be reviewed in the future with a detailed assessment of costs and benefits.
Captains Clough	QSL at Doffcocker Lodge to Middle Brook	RE2	RE3	Improvements planned but the catchment is urban and lengths of the brook are in culvert. RE2 is perceived as not consistently achievable. RE4 may be considered in the future with detailed assessment of costs and benefits of RE3.
Astley Bk.	A666 to Eagley Bk.	RE4	RE3	As for short-term RQO, review of data. Recognising significant improvements in water quality since the Action Plan assessment.
Croal Minor	Captains Clough to Croal	RE4	RE3	Review of data. RE3 perceived as an achievable objective. This objective may be reviewed in the future with detailed assessment of costs and benefits.
Bradshaw Bk.	Jumbles Resvr. Inlet to Bradshaw Brow	RE4	RE2	As for short-term RQO, review of data. One atypical result affecting previous assessment.

RIVER	STRETCH	ACTION PLAN PROPOSED LONG-TERM RE RQO	REVISED LONG-TERM RE RQO	REASON FOR CHANGE
Whit (Trub) Bk.	QSL at Castleton STW to Irk.	RE4	RE3	RE3 perceived as an achievable objective. This objective may be reviewed in the future with a detailed assessment of costs and benefits.
Irk	Cedar Grove SSO to Royton STW.	RE2	RE3	Review of data and nature of catchment. Although significant improvements are taking place RE2 is not perceived as a consistently achievable objective.
Thornley Bk.	QSL at Wood Bk. to Medlock.	RE4	RE3	Review of data. RE3 is perceived as a consistently achievable objective in the long- term.
Lumb Bk.	QSL at Railway to Medlock.	RE4	RE3	Review of data and effects of first stage of improvements. RE3 is perceived as an achievable objective in the long term. This objective may be reviewed in the future with a detailed assessment of costs and benefits.
Medlock	QSL at Upper Strinesdale to Strinesdale.	RE1	RE2	As for short-term RQO, additional data indicates that RE1 is not consistently achievable.
Medlock	Glodwick Bk. to Lords Bk.	RE4	RE3	Review of data, recognising improvements completed since the Action Plan assessment period. RE3 is perceived as consistently achievable in the long-term.
Medlock	Lords Bk. to Irwell	RE4	RE3	RE3 perceived as an achievable objective. This objective may be reviewed in the future with a detailed assessment of costs and benefits.
Folly Bk.	QSL at Swinton STW to Worsley Bk.	RE2	RE3	Review of data and nature of the catchment. RE3 is perceived as a consistently achievable objective in the long-term. RE4 might be considered in the future with a detailed assessment of costs and benefits of RE3.

RIVER	STRETCH	ACTION PLAN PROPOSED LONG - TERM RE RQO	REVISED LONG-TERM RE RQO	REASON FOR CHANGE
Worsley Bk.	QSL at Folly Brook to Eccles STW	RE4	RE3	Review of data and expectations for upstream tributary, Folly Brook. RE3 is perceived as a consistently achievable objective in the long-term. This may be reviewed in the future with a detailed assessment of costs and benefits.
Irwell	Roch to Salford University	RE4	RE3	RE3 now perceived as an achievable objective. This may be reviewed in the future with a detailed assessment of costs and benefits.

long-term river ecosystem RQOs

MANAGEMENT AND CONTACTS:

The Environment Agency delivers a service to its customers, with the emphasis on authority and accountability at the most local level possible. It claims to be cost-effective and efficient and to offer the best service and value for money.

Head Office is responsible for overall policy and relationships with national bodies including Government.

Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS12 4UD
Tel: 015454624 400 Fax: 01454 624 409

NORTH WEST INFORMATION ENQUIRIES

REGIONAL HEADQUARTERS
PO Box 12
Richard Fairclough House
Knutsford Road
Warrington WA4 1HG
Tel: 01925 653 999
Fax: 01925 415 961

CENTRAL AREA
Lutra House
Dodd Way
Walton Summit
Bamber Bridge
Preston PR5 8BX
Tel: 01772 539 882
Fax: 01772 627 730

AREA OFFICES

SOUTH AREA
Mirwell
Carrington Lane
Sale M33 5NL
Tel: 0161 973 2237
Fax: 0161 973 4601

NORTH AREA
Chertsey Hill
London Road
Carlisle CA1 2QX
Tel: 01228 25151
Fax: 01228 49734

For general enquiries please call your local Environment Agency office. If you are unsure who to contact, or which is your local office, please call our general enquiry line.

ENVIRONMENT AGENCY GENERAL ENQUIRY LINE
0645 333 111

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water.

ENVIRONMENT AGENCY EMERGENCY HOTLINE
0800 80 70 60

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